WHAT IS CLAIMED IS:

1   1. A method comprising:

2   in a network, responding to a request for a computational resource available for

3   computing a task by sending a list of available computational resources;

4   receiving a selection of a computational resource for reservation;

5   if the selection of the computational resource is available for computing the task,

6   reserving the selection and sending a reservation number for the selection; and

7   sending the request to a different portion of the network if computational

8   resources are unavailable for computing the task.

1   2. The method of claim 1 wherein the list of available computational resources comprises

2   network addresses of the available computational resources.

1   3. The method of claim 1 wherein reserving the selection further comprises assigning the

2   reservation number.

1   4. The method of claim 1 in which reserving further comprises:

2   waiting a predetermined time period for the computational resource to begin

3   computing the task; and

4   if the predetermined time period is expired and the computational resource has not

5   begun computing the task, then freeing the computational resource for subsequent

6   reservation for computing a second task.

1   5. The method of claim 1 wherein responding to the request further comprises comparing

2   requirements for computing the task with specifications of the available computational

3   resources.

4   6. The method of claim 5 further comprising generating a list of computational resources

5   by querying a portion of the network.

1   7. A method comprising:

2   in a network, sending, by a first service, a request for a list of one or more

3   computational resources that are available for computing a task;

4   responding, by a second service, to the request by collecting information on

5   computational resources;

6   sending a list of available computational resources;

7   receiving a selected computational resource for reservation;

8   reserving the selected computational resource and sending reservation

9   number of the selected computational resource if the selected computational resource is

10   available for computing the task; and

11   sending the request to a second service if the first service has no

12   information on available computational resources.

1   8. The method of claim 7 wherein sending the list of available computational resources

2   comprises sending network addresses of the available computational resources.

1   9. The method of claim 7 wherein reserving the selected computational resource further

2   comprises assigning a reservation number.

1   10. The method of claim 7 in which reserving further comprises:

2   waiting a predetermined time period for a request for the selected computational

3   resource to begin computing the task; and

4   releasing the selected computational resource for subsequent reservation for

5   computing a second task if the predetermined time period is over and the request for the

6   reserved computational resource has not been received.

1   11. The method of claim 7 wherein responding to the request further comprises

2   comparing requirements for computing the task with specifications of available

3   computational resources that are described by information accessible to the first service.

1   12. The method of claim 7 wherein the second service has a stored relation to the first

2   service.

1   13. The method of claim 11 wherein the first service executes instructions on a first

2   computer system and the computational resources managed by the first service comprise

3   a first set of computational resources located on the first computer system.

14. The method of claim 13 wherein a third service has a stored relation with the first service, the third service executes instructions on a second computer system, and the computational resources that are described by information accessible to the first service further comprise a second set of computational resources that are described by information accessible to the third service.

15. A network comprising:

a first computer system having a first set of one or more computational resources and configured to execute instructions of a first service; and

a second computer system configured to execute instructions of a second service, the first service configured to:

respond to a request for a list of computational resources for computing a task by collecting information on at least the first set of one or more computational resources;

send a list comprising a subset of the first set of the one or more computational resources;

receive a selection of a computational resource for reservation;

reserve the selection and send an address of the selection if the selection of the computational resource is available for computing the task; and

send the request to the second service if computational resources are unavailable for computing the task.

16. The network of claim 15 further comprising:

a third computer system having a second set of one or more computational resources and configured to execute instructions of a third service, the third service having an stored relation to the first service; wherein the first service is further configured to collect information on the second set of one or more computational resources and the list further comprises a subset of the second set of the one or more computational resources.

17. The network of claim 15 wherein reserving the selection further comprises assigning a reservation number.

1   18. The network of claim 15 wherein the first service is further configured to:

2   wait a predetermined time period for the reserved computational resource to begin

3   computing the task; and

4   if the predetermined time period is over and the reserved computational resource

5   has not begun computing the task, then free the reserved computational resource for

6   subsequent reservation for computing a second task.

1   19. The network of claim 15 wherein to respond to the request further comprises

2   comparing requirements for computing the task with specifications of available

3   computational resources from the first and second sets of computational resources.

1   20. The network of claim 15 wherein the second service has a stored relation to the first

2   service.